PLANTS COLLECTED IN THE SANDWICH ISLANDS BY THOMAS NUTTALL

HAWAIIAN PLANT STUDIES 85

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Introduction Thomas Nuttall (1786-1859) made several bothical explorations. He collected in the eastern and southern United States, in the Rocky Mountains, Oregon, California, and the Sandwich Islands.

On Jan. 4, 1835 he arrived off Diamond Hill, Oahu, landed, and botanized in Nuuanu Valley. Soon he moved to Koloa, Kauai, where he spent a month. On March 26, 1835 he sailed from Honolulu toward the Columbia River.

At the end of Sept. 1835 he sailed from the Columbia toward Honolulu. He stayed for four months, and made a visit to the island of Hawaii, then left in Jan. 1836 for California.

Nuttall collected in the Hawaiian Islands at least 118 species, but it is worth noting that he collected no ferns. He published fundamental studies on the flora of eastern and of western North Amerca, and a large percentage of his American novelties are still accepted as correct. Of his Hawaiian plants he published only five as new species, but four of these proved to be synonyms. Of his 118 Hawaiian specimens, he marked and named 62 as new species, but these were never published. He was unaware of several of the earlier publications that described Hawaiian plants. Numerous of his proposed Hawaiian species were unnecessary synonyms. His Hawaiian specimens are in the herbarium of the British Museum of Natural History, London.

> Enumeration Monocotyledones Gramineae

Chrysopogon aciculatus (Retz.) Trin. Echinochloa colonum (L.) Link, Ouau =Oahu, as a new species.

Heteropogon contortus (L.) Beauv. Cyperaceae

Cyperus javanicus Houtt. Owhyhee = Hawaii. C. trachysanthos H. & A. Ouau. Fimbristylis pycnocephala Hbd. Ouau.

Gahnia Beecheyi Mann, Ouau.

Commelinaceae

Commelina diffusa Burm. f., as a new species.
Taccaceae

Tacca Leontopetaloides (L.) Ktze., T. oceanica Nutt.

Liliaceae

Cordyline terminalis (L.) Knuth, var. Ti(Schott)
J. G. Baker, as a new species.

Dianella sandwigensis H. S. A. Wahee

Dianella sandwicensis H. & A.Wahoo.

Smilax sandwicensis Kunth, Wahoo. Dicotyledones Piperaceae

Peperomia leptostacya H. & A., Wahoo, as a new species of Piper.

Peperomia Macraeana C. DC.

Peperomia membranacea H. & A., var. membranacea, Wahoo, as a new species of Piper.

Peperomia sandwicensis Miq., Wahoo etc., two specimenseach as a different new species of Piper.

Peperomia tetraphylla (Forst. f.) H. & A., Wahoo. var. parvifolia (C. DC.) Deg. & Deg., Wahoo, as a new species of Piper.

Piper methysticum Forst. f., Wahoo, "kava." Santalaceae

Santalum ellipticum Gaud., f. ellipticum, Owhyhee, two specimens.

Santalum paniculatum H. & A., Owhyhee, as a new species.

Santalum pyrularium Gray, Atooi (=Kauai), as a
new species.

Chenopodium oahuense(Meyen) Aellen, Wahoo, in

ruderatis, two specimens, each as a new species.

Amaranthaceae

Achyranthes splendens Mart. ex Mog., var. rotundata Hbd., Wahoo, as a new species.

Amaranthus viridis L., Wahoo, in ruderatis, as a new genus and species.

Charpentiera ovata Gaud., Wahoo. Nyctaginaceae

Boerhavia diffusa L., Wahoo, in ruderatis.
Phytolaccaceae

Phytolacca sandwicensis Endl., var. sandwicensis, Wahoo, as a new species.

Aizoaceae

Sesuvium Portulacastrum (L.) L., Wahoo, three specimens, two of them as different new species.

Portulacaceae

Portulaca ?cyanosperma Egler, Atooi.

Capparaceae

Cleome sandwicensis Gray, Woahoo, plains.

Cruciferae
Lepidium o-waihiense C. & S., Woahoo, in rupes
montosis, as a new species.

Pittosporaceae

Pittosporum terminalioidesPlanch. ex Gray, Wahoo, sylvis rupestris, as a new species. Saxifragaceae

Broussaisia arguta Gaud., f. arguta, Owhyhee, C. Deal.

Rosaceae

Osteomeles anthyllidifolia (Sm.) Lindl., Ouau. Leguminosae

Caesalpinia Bonduc (L.) Roxb., Atooi, as a new species.

Canavalia galeata (Gaud.) Vogel, as a new genus. Cassia Gaudichaudi H. & A., Wahoowest of the Parri (= Nuuanu Pali).

Sesbania tomentosa H. & A., Owhyhee.
Zygophyllaceae

Tribulus Cistoides L., Wahoo, in ruderatis, as a new species.

Rutaceae

Pelea elliptica (Gray) Hbd., Wahoo, sylvis, as a new genus.

Pelea, two species in flower and leaf only, as a new genus.

Zanthoxylum dipetalum Mann, Ouau. Euphorbiaceae

Aleurites moluccana (L.) Willd., two specimens, one from Owhyhee, Deal, as a new species.

Euphorbia celastroides Boiss., var. haupuana Sherff, Wahoo, Parri (= Nuuana Pali), as a new species.

Euphorbia hirta L., Wahoo, in montis. Phyllanthus sandwicensis Muell. Arg.,

var. sandwicensis, Wahoo, Parri (= Nuuanu Pali), as a new species.

Anacardiaceae

Rhus sandwicensis Gray, Owhyhee, Dr. Deal
 ( = Diehl).

Aquilifoliaceae

Ilex anomala H. & A, Wahoo.

Celastraceae

Perrottetia sandwicensis Gray, Ouau, as a new genus.

Rhamnaceae

Colubrina asiatica (L.) Brongn., Atooi.

Malvaceae

Abutilon incanum (Link) Sweet, Wahoo.

Hibiscus Kokio Hbd., ex Wawra, Wahoo, as a new species.

Hibiscus tiliaceus L., Wahoo, as a new species. Hibsicus Youngianus Gaud. ex H. & A., Wahoo,

in campis elatioribus, as a new species.

Sida sertum Nutt., holotype, used for garlands. Sterculiaceae

Waltheria indica L., Wahoo, two sheets, as a new species.

Flacourtiaceae

Xylosma hawaiiense Seem., no. 6. Ouau. Myrtaceae

Metrosideros macropus H. & A., Ouau.

Metrosideros polymorpha Gaud., var. polymorpha, Wahoo, Parri (=Nuuanu Pali).

Metrosideros tremuloides (Heller) Knuth, Wahoo, as a new species.

Araliaceae

Cheirodendron trigynum (Gaud.) Heller, Wahoo, in sylvis, as a new species.

Ericaceae

Vaccinium calycinum Sm., f. calycinum. Vaccinium dentatum Sm., Wahoo Parry (=Nuuanau Pali), rocks, as a new genus.

Vaccinium reticulatum Sm., as a new genus.

Epacridaceae

Styphelia Tameiameiae (Cham.) F. Muell.

Plumbaginaceae

Plumbago zeylanica L., Atooi.

Apocynaceae

Alyxia olivaeformis Gaud.

Convolvulaceae

Cuscuta sandwichiana Choisy, Atooi, as a new species.

Hydrophyllaceae

Nama sandwicensis Gray, two sheets, from Atooi, and Wahoo, each as a new species.

Boraginaceae

Heliotropium anomalum H. & A., var. argenteum Gray, Atooi, two sheets, each as a new species.

Labiatae

Phyllostegia glabra (Gaud.) Benth., var. Macraei (Benth. in A. DC.) Sherff, Wahoo. Phyllostegma grandiflora (Gaud.) Benth., Wahoo.

Phyllostegia hirsuta Benth., Wahoo, as a new species.

Phyllostegia parviflora (Gaud.) Benth., var. parviflora, in montis Ouau.

Stenogyne kaalae Wawra, var. latisepala Sherff, Wahoo, rocks nr. the summit of the Parri (=Nuuanu Pali).

Solanaceae

Lycium sandwicense Gray, Atooi; Wahoo, as a new species.

Solanum nigrum L., Wahoo, as a new species. Scrophulariaceae

Bacopa Monnieria (L.) Wettst., Wahoo, ad lit.
maris (=by the seashore).

Gesneriaceae

Cyrtandra cordifolia Gaud., Woahoo, montes. Cyrtandra Garnotiana Gaud. (?), two scraps, Wahoo.

Cyrtandra grandiflora Gaud., Wahoo.

Cyrtandra Lessoniana Gaud., var. Lessoniana, Wahoo, as a new species, two sheets.

Cyrtandra paludosa Gaud., Wahoo, "moa" of the islanders.

Plantaginaceae

Plantago princeps C. & S., var. acaulis Wawra, Wahoo, falls of a stream, as a new species. Plantago princeps C. & S., var. Queleniana (Gaud.) Rock, Ouau.

Rubiaceae

Bobea elatior Gaud., Wahoo, in sylvis, two sheets.

Coprosma ernodeoides Gray, Owhyhee, F. Deal legit, as a new genus.

Coprosma foliosa Gray, Wahoo, as a new genus. Gouldia terminalis (H. & A.) Hbd., not determined to the variety, arbor, Wahoo, two sheets, as two new species.

Hedyotis acuminata (C. & S.) Steud., f. Grayana Fosb., nom. vern. "etaha." As a new genus.

Hedyotis Remyi (Hbd.) Fosb., var. Nuttallii (Fosb.) Fosb., Ouau, probably an isotype.

Psychotria Fauriei (Lévl.) Fosb., Wahoo, as a new genus.

Psychotria kaduana (C. & S.) Fosb., Wahoo, two sheets, each as a new species.

Psychotria longissima (Rock) St. John, Wahoo, as a new species.

Psychotria Mariniana (C. & S.) Fosb., Ouau, as a new species.

Lobeliaceae

Clermontia kakeana Meyen, (C. macrophylla Nutt.), Wahoo.

Cyanea acuminata (Gaud.) Hbd., Wahoo.

Cvanea Grimesiana Gaud.

Rollandia lanceolata Gaud., Owhyhee.

Goodeniaceae

Scaevola X cerasifolia Skottsb., (S. pubescens Nutt.), holotype, Wahoo.

Scaevola coriacea Nutt., holotype, Atooi. Scaevola Gaudichaudiana Cham., Ouau, as a new species.

Scaevola mollis H. & A., as a new species. Scaevola Taccada (Gaertn.) Roxb., Atooi, in montes, as a new species.

Compositae

Argyroxiphium sandwicense DC., Owhyhee, Volcano, Mr. Deale (=Diehl).

Artemisia australis Less., Wahoo, Parre (=Nuuanu Pali), as a new genus.

Bidens asymmetrica (Lévl.) Sherff, Wahoo, as a new species.

Gnaphalium sandwicensium Gaud., var. sandwicensium, Ouau.

Lipochaeta connata (Gaud.) DC., Wahoo, as a new genus.

Lipochaeta integrifolia (Nutt.) Gray, Atooi, Wahoo, as a new genus.

Lipochaeta micrantha (Nutt.) Gray, (Schizophyllum micranthum Nutt.), holotype, Atooi, in sylvis opacis.

Tetramolopium tererrimum (Less.) Nees, Wahoo, in rupibus Parry dictu (=Nuuana Pali).